4. Knight

Program Name: Knight.java Input File: knight.dat

In chess the knight piece can only move in a special fashion. This movement involves moving two places up, down, left, or right, and then one place perpendicular to its previous direction. Only one piece can occupy a chessboard square -- if a knight lands on a piece occupied by an enemy piece, it captures the enemy piece, which is then removed from the board.

You will be given a list of locations of pieces on an NxN board. Your knight will start at the bottom left location (0,0) (there will be no other piece at (0,0)) and must always move one or two steps towards the right in each move. You must solve for the most pieces that your knight can capture by the time it reaches the right side of the board if it is the only piece moving and all other pieces are enemies.

Input
The first line will contain two numbers N, and P. P lines will follow, each stating two points X and Y.

Constraints
```
4 < N < 100
0 < P < 100
0 <= X,Y < N
```

Output
Output a single number stating the maximum number of pieces you can take.

Example Input File
```
5 3
2 1
1 2
3 3
```

Example Output to Screen
```
2
```

This figure shows one path to that the knight takes to reach the right side of the board, capturing 2 pieces (in Bold) along the way.